

An aerial night photograph of the Chicago metropolitan area. The city's street grid is visible, with major transportation corridors highlighted by bright, glowing white lines. A large, dark, irregularly shaped area in the upper right represents a body of water, likely Lake Michigan. The overall color palette is dark blue and black, with the glowing lines providing a stark contrast.

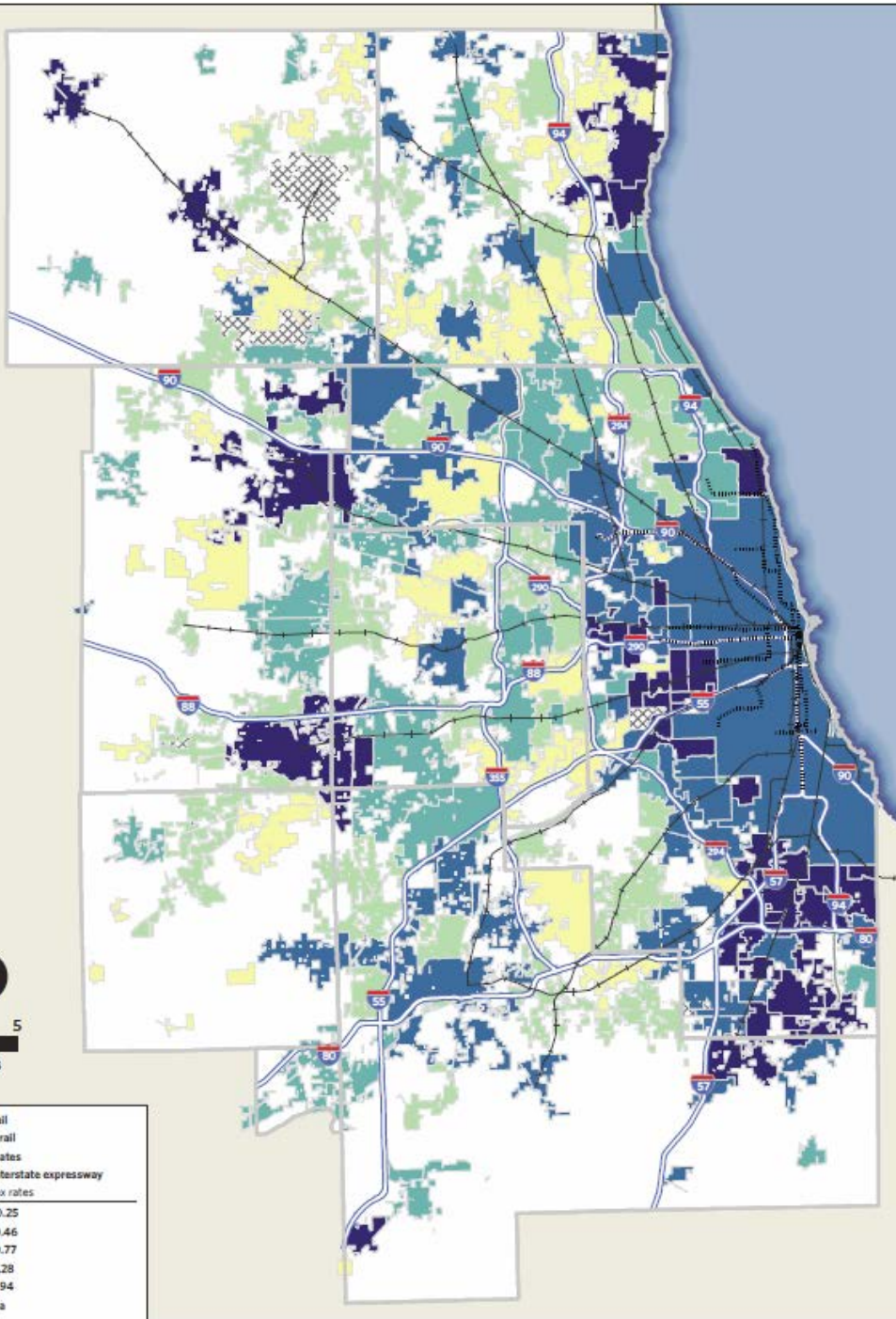
Planning and Sustainability in the Chicago Metropolitan Region

Illinois Sustainable Technology Center
Sustainable Seminar Series
Planning for Regional and Local Sustainability
April 18, 2014

CMAP serves the third largest U.S. metropolitan region

7 counties
284 municipalities
123 townships
307 school districts
812 school, fire, park,
library, other districts

1,226 total local govts





**By 2040, our region will need to
accommodate 25% more residents**

8,600,000

TODAY

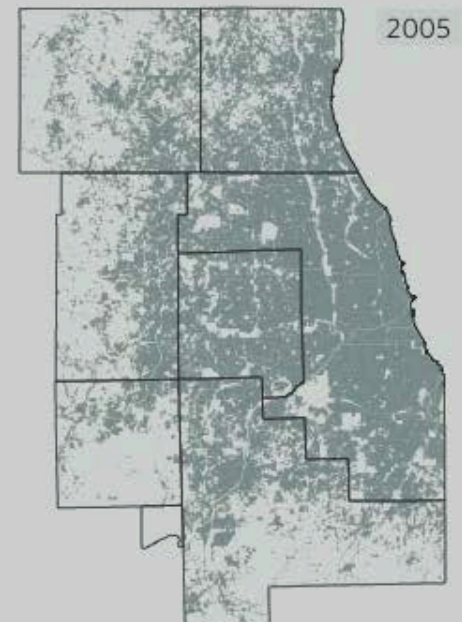
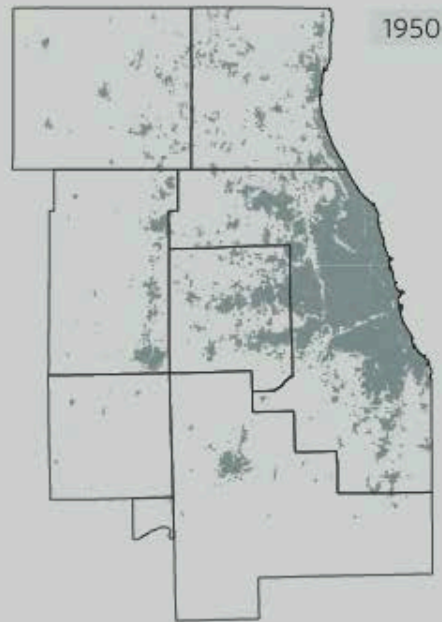
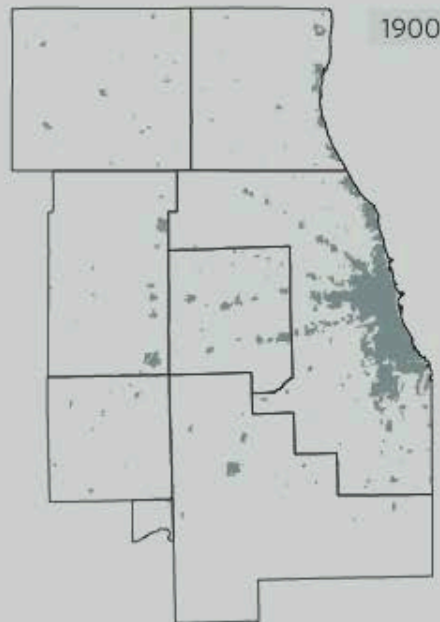
11,000,000

BY 2040



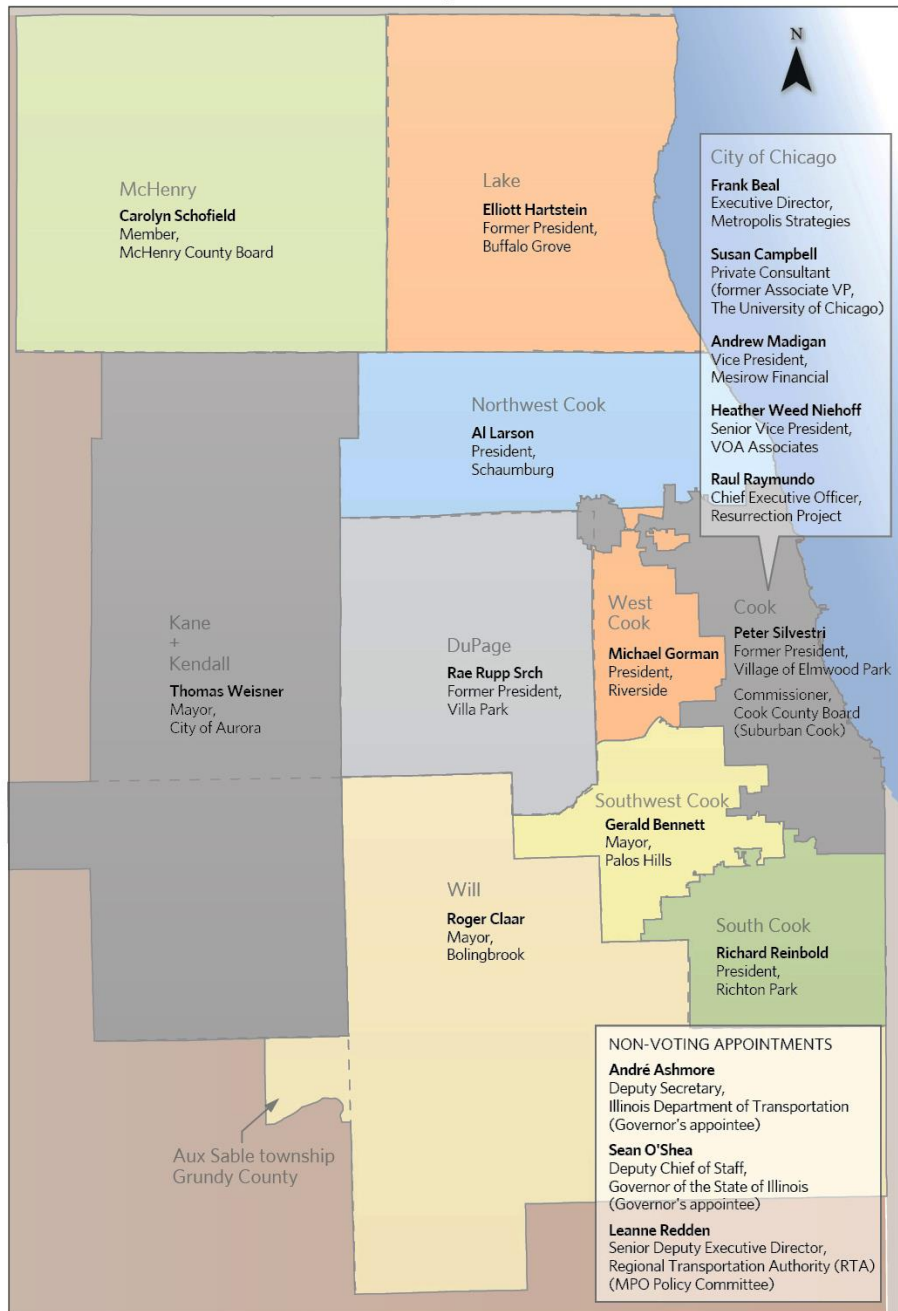
DEVELOPED AREA 1900–2005

Source: U.S. Environmental Protection Agency and CMAP



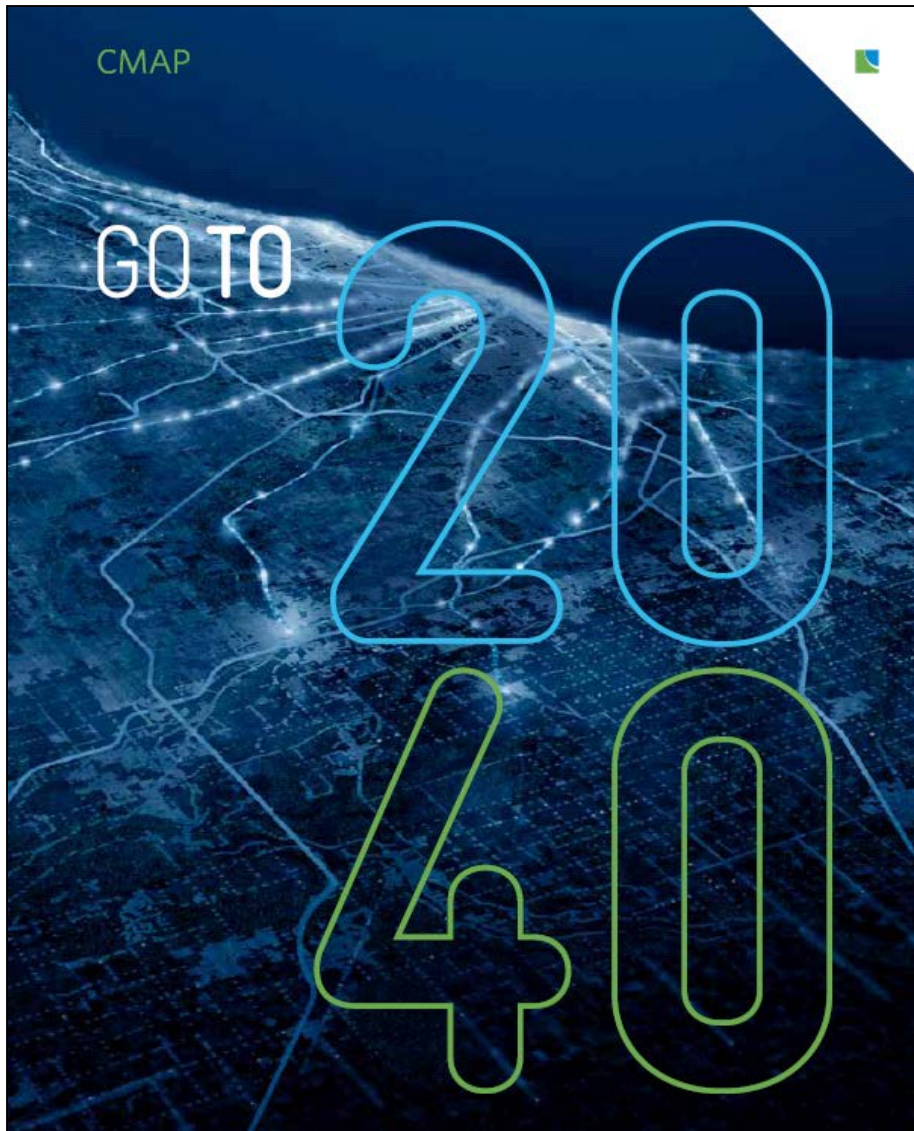
Regional Challenges

- Population is aging and more diverse
- Existing communities experience disinvestment as growth occurs
- Community fiscal health (tax revenues) can create disparities
- Regional pattern of growth created congestion and distance between affordable housing and jobs
- Transportation system is congested and aging, transit underperforms other regions, movement of goods is compromised due to congestion
- Land and water resources are impacted by urban development



Chicago Metropolitan Agency for Planning

- Established in 2005 by the IL General Assembly at the urging of local elected officials and business leaders.
- Mission: to plan comprehensively for economic prosperity and quality of life.
- Goal: integrate planning for transportation and land use.
- Seven-county area, with geographically representative Board



- Comprehensive, long-range plan for Chicago metropolitan area adopted in 2010
- Establishes a vision for future of the region
- Recommends policies, strategies, and actions (strategic plan)
- Forms basis for all CMAP work
- Integrates sustainability throughout, not as an individual topic
- Achieve sustainability through better decision making about land use and transportation

Livable Communities



Human Capital



Efficient Governance



Regional Mobility



Key Recommendations

Livable Communities

1. Land Use and Housing
2. Water & Energy Conservation
3. Parks and Open Space
4. Sustainable Local Food

Human Capital

5. Education and Workforce Development
6. Economic Innovation

Efficient Governance

7. Tax Policy
8. Access to Information
9. Coordinated Investments

Regional Mobility

10. Transportation Investments
11. Public Transit
12. Freight

Integrated sustainability



Sustainability-related recommendations

- Preserve valuable environmental features, plants, habitat
- Conserve energy, water, wetlands, streams, groundwater
- Provide access to parks and open space for recreation
- Support sustainable, local food systems
- Support transit, walking, and biking
- Encourage reuse of buildings and developed areas / encourage infill growth
- Encourage compact, walkable, mixed-use neighborhoods
- Encourage diversity of housing and jobs in close proximity



Implementation of Plan – Encouraging better decision-making

- CMAP has no legislative nor taxing authority
- CMAP is *advisory*, a think tank for better decision making
- Research market and public policy trends
- Demonstrate market and non-market costs and benefits to economy, environment, and society
- Data collection and dissemination
- Collaboration and facilitation
- Recommend strategies to encourage change at local level
- Training & information sharing
- Technical assistance and grants

An aerial night photograph of a city, likely Chicago, showing a dense network of glowing roads and highways. A large, dark lake is visible in the upper right portion of the image. The city lights create a complex web of white and yellow lines against the dark landscape.

challenges

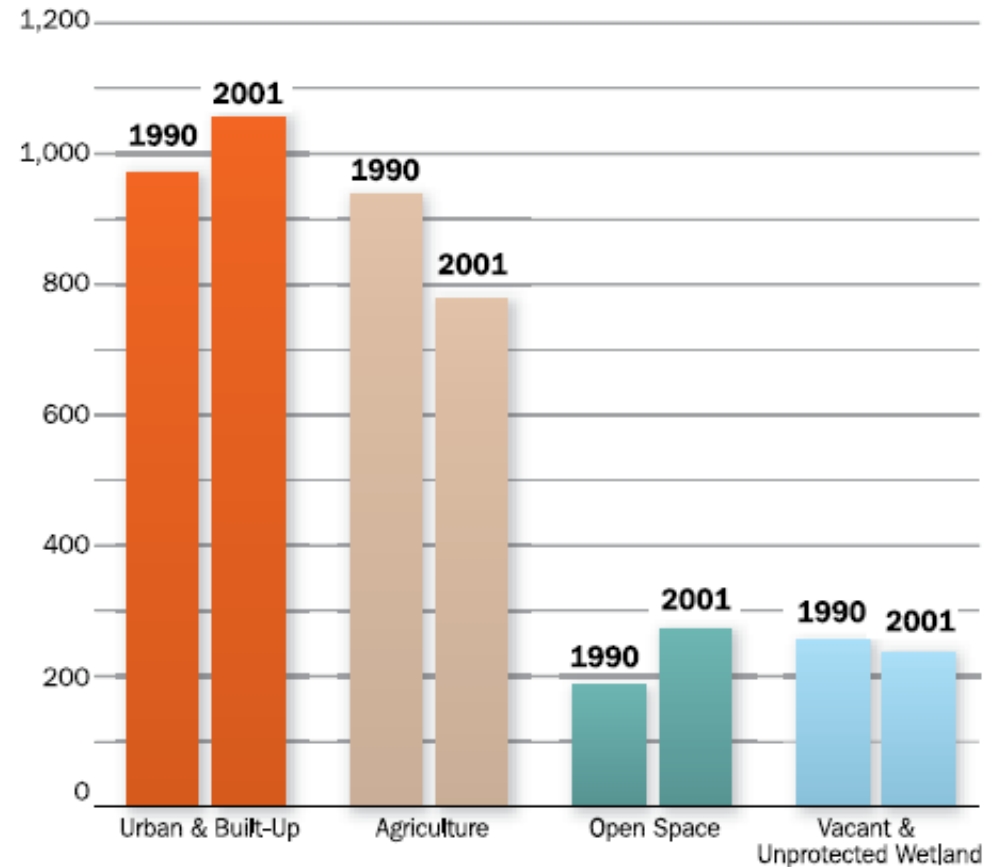
Challenges

- Land and water resources are impacted by urban development

Figure 15.

Changes in land use, 1990-2001

In thousands of acres



Source: CMAP Data Bulletin: 2001 Land-use Inventory for Northeastern Illinois, September 2006

Challenges

- Land and water resources are impacted by urban development

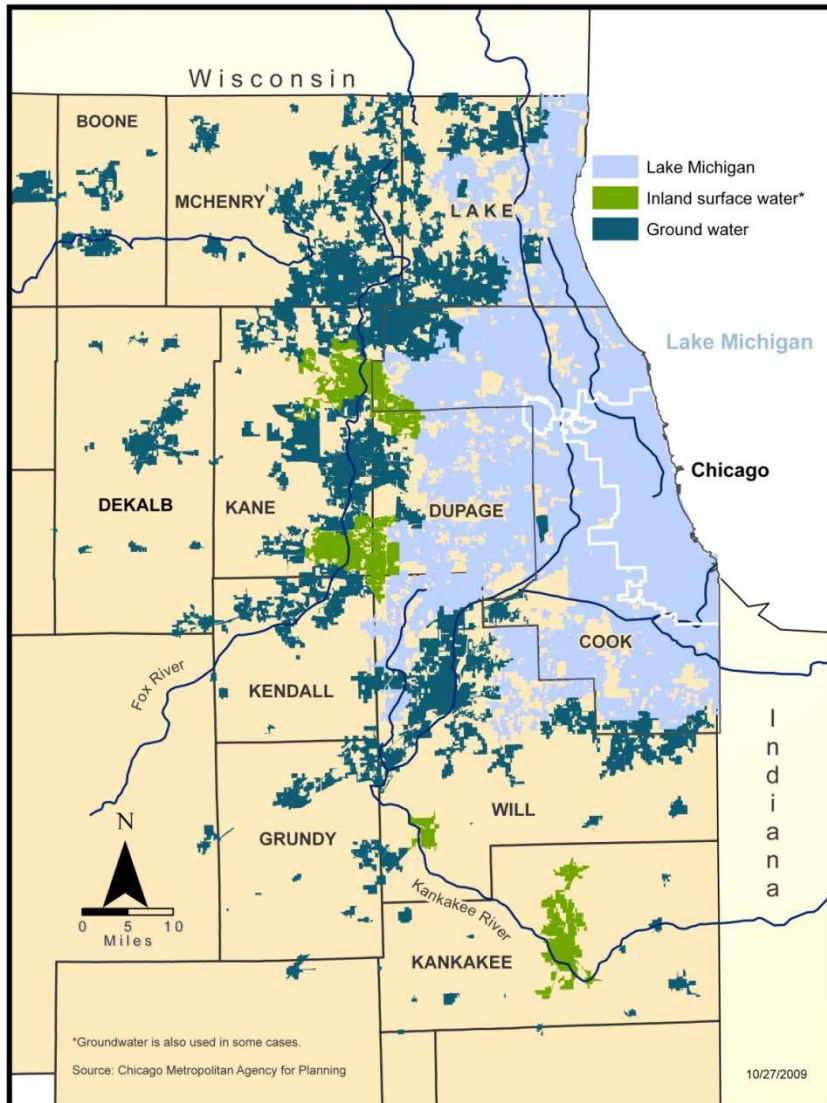
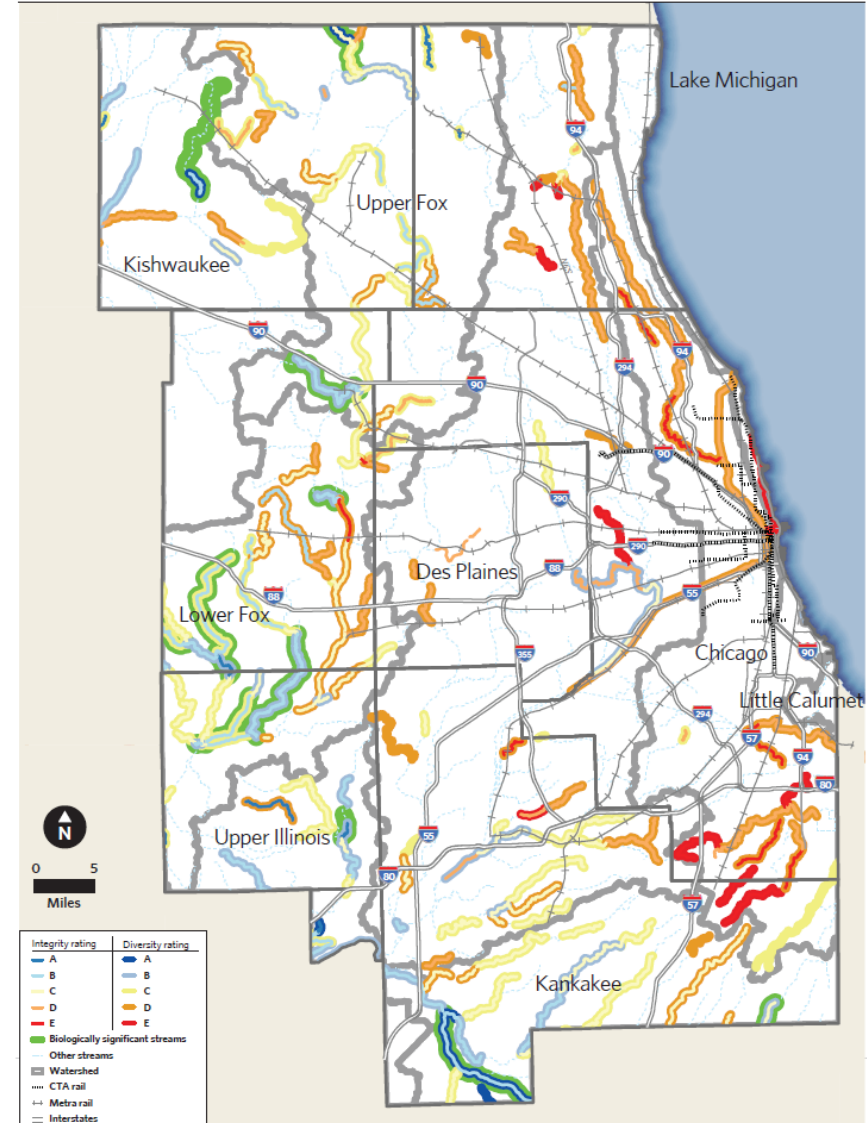
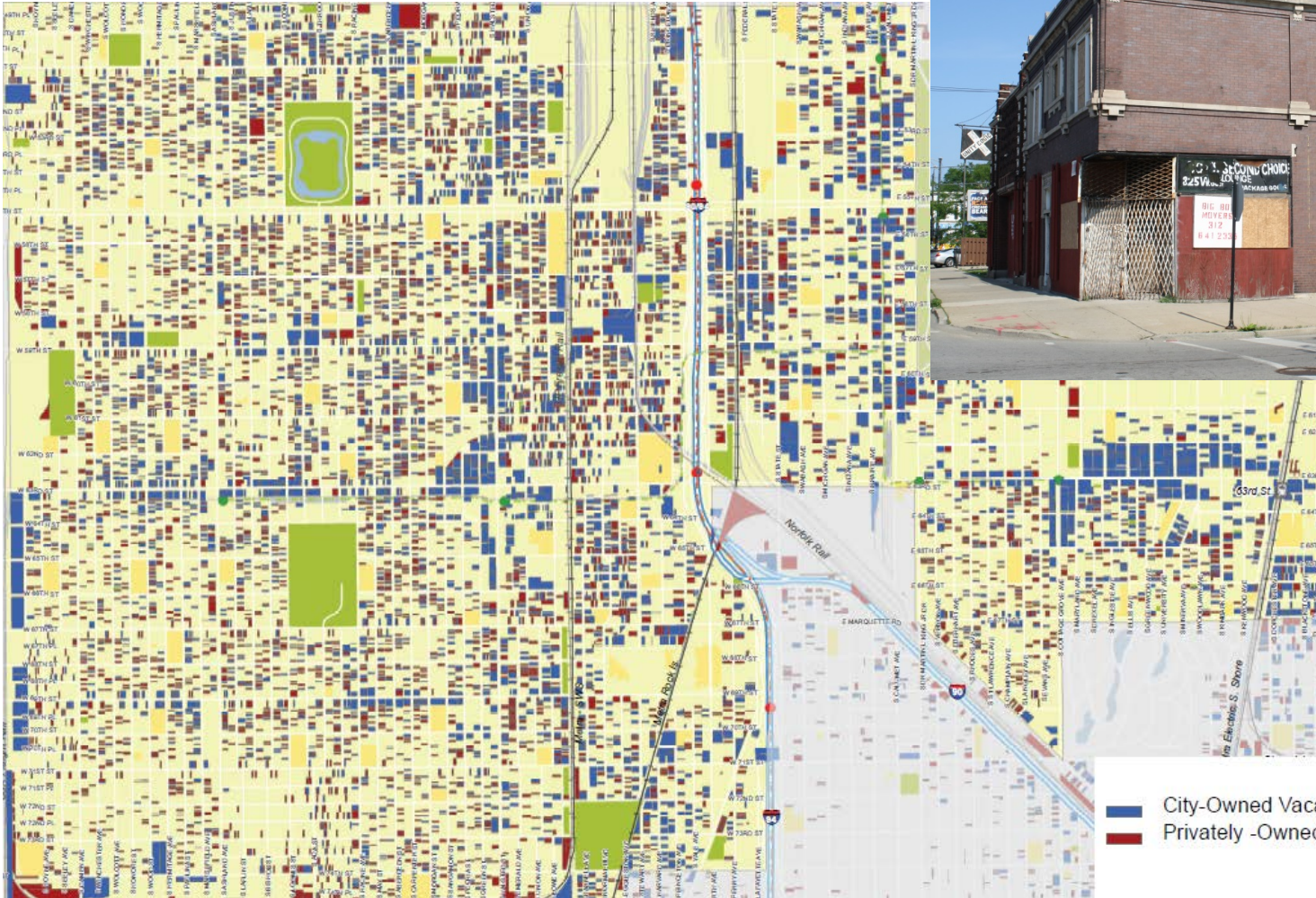


Figure 17. Biological stream ratings for integrity and diversity

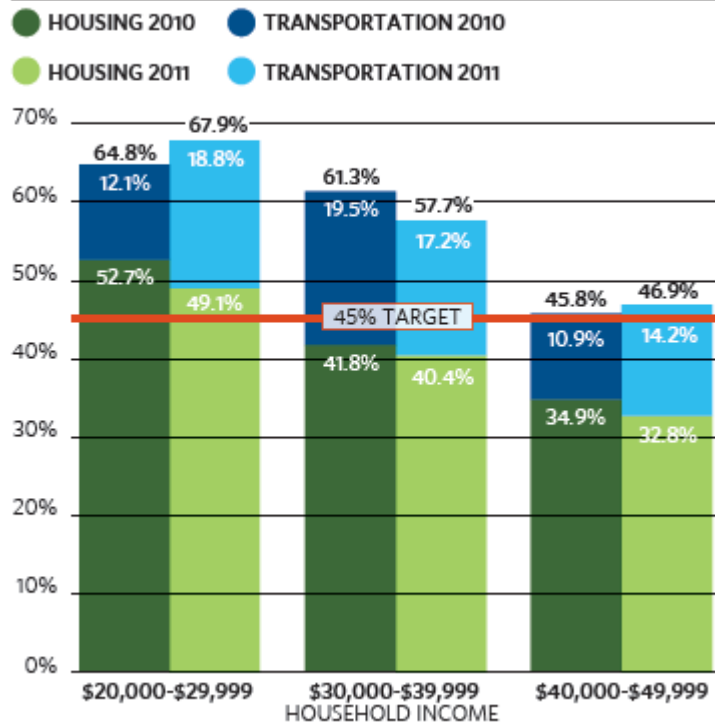
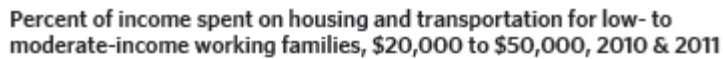


Challenges

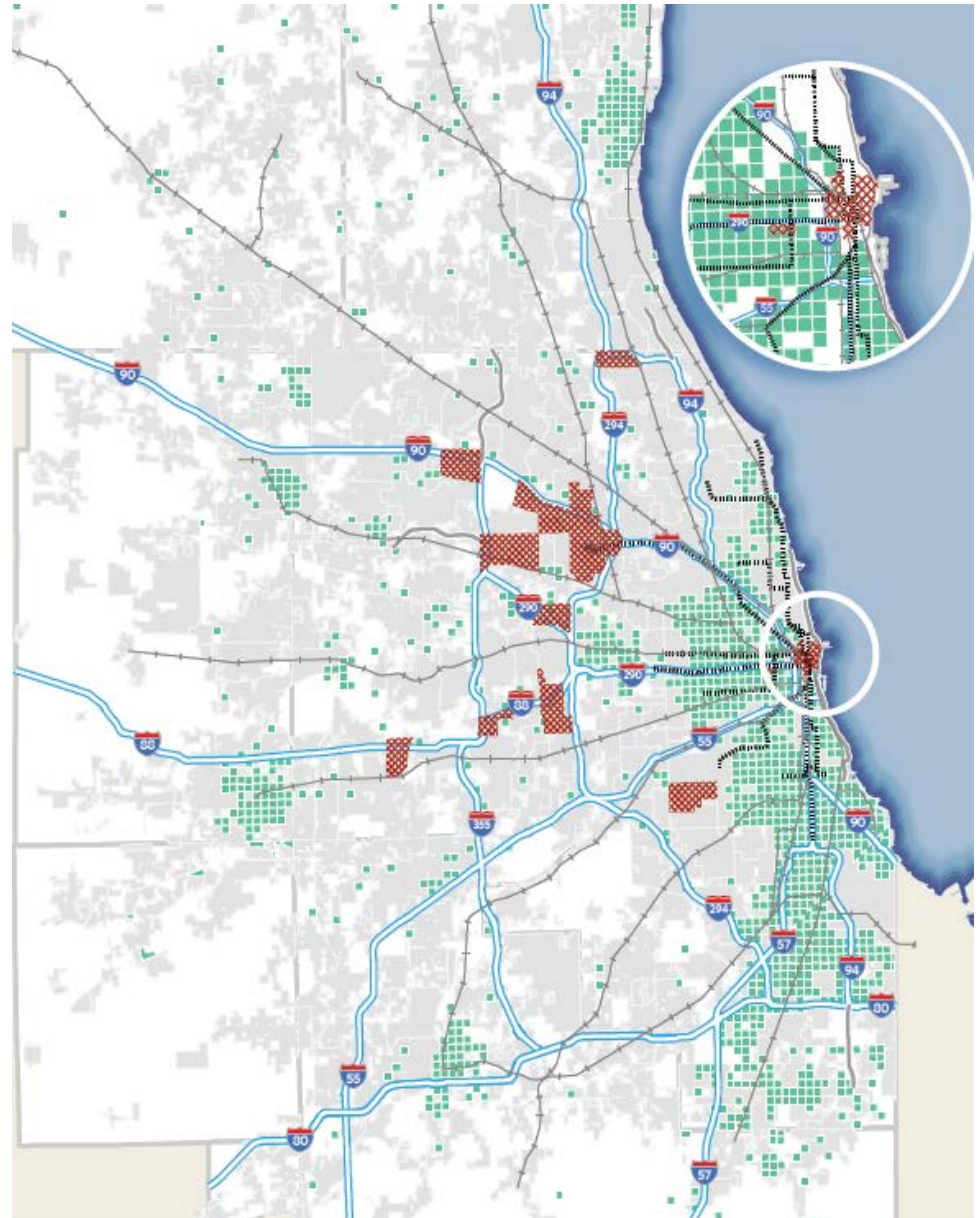
- Existing communities are experiencing disinvestment as we convert more green space into new urban communities



- Region has grown in ways that create congestion and distance between affordable housing and jobs



Source: Bureau of Labor Statistics Consumer Expenditure Survey public-use microdata.



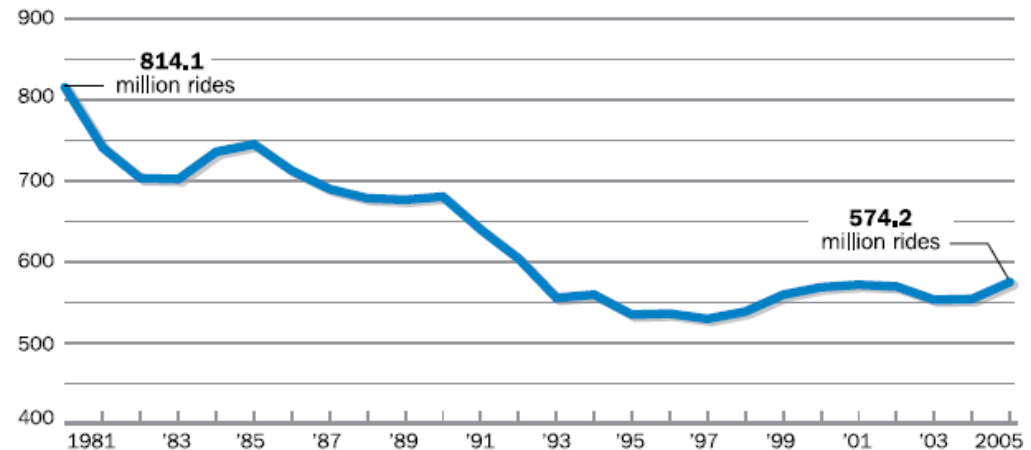
Challenges

- Our transportation system is congested and aging, transit underperforms compared to other regions, and movement of people and goods is compromised due to congestion



Figure 23.

Transit ridership, 1980 – 2005, in millions of annual trips



Source: Regional Transportation Authority, Regional Transportation Asset Management System (RTAMS)



An aerial night photograph of a city, likely Chicago, showing a dense network of glowing roads and highways. A large, dark lake is visible in the upper right portion of the image. The city lights create a complex web of white and yellow lines against the dark landscape.

strategies

reduce land consumption & invest in existing communities

- Redevelopment / infill of underutilized acres
 - 20,000 acres by 2015
 - 100,000 acres by 2040
- Link transit, Land Use, Housing, and Jobs
- Transit oriented development, housing diversity, infill / reinvestment

Figure 17: Effects of Development Pattern on Infrastructure Costs¹⁵

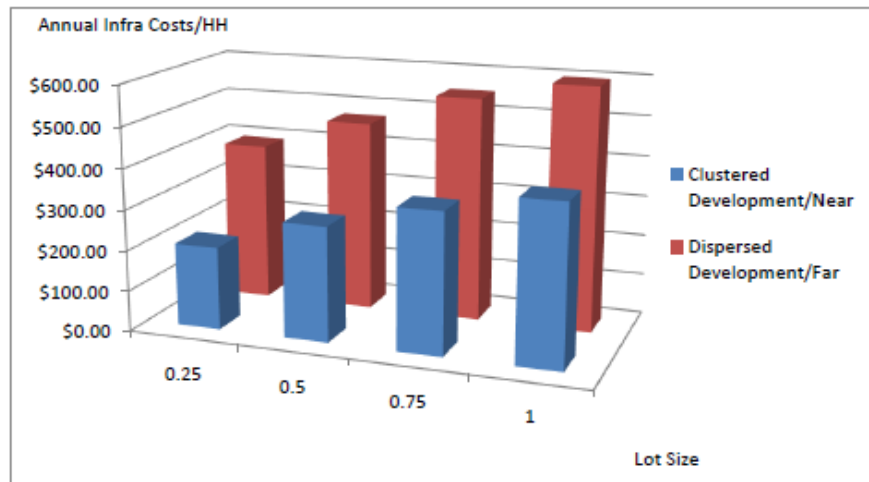
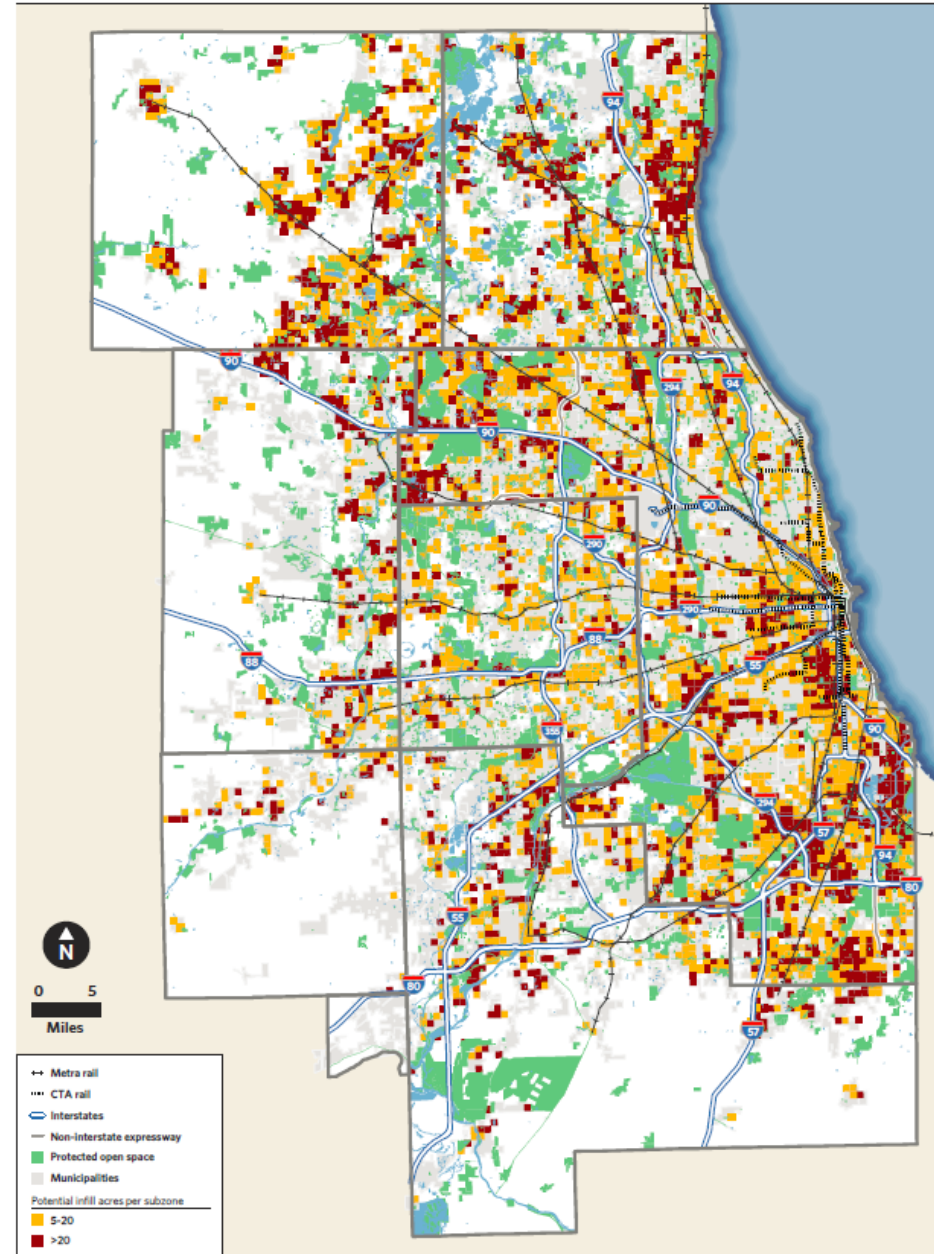


Figure 11. Opportunities for reinvestment



Source: Chicago Metropolitan Agency for Planning, 2010

moving people

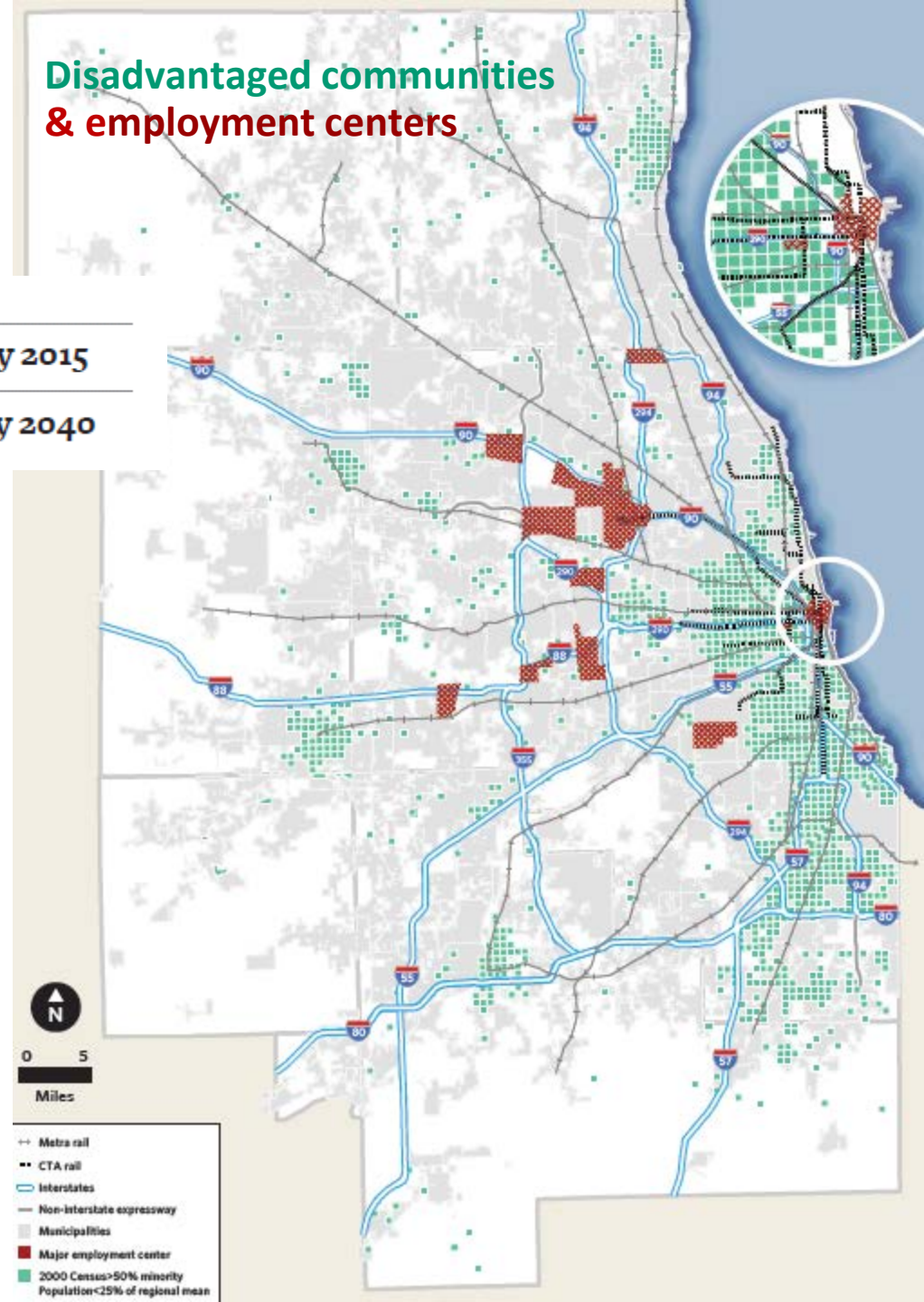
POPULATION AND JOBS WITH ACCESS TO TRANSIT

69 % of residents and 77 % of jobs by 2015

75 % of residents and 80 % of jobs by 2040

- Identify opportunities to develop and increase residential density around transit
- Promote affordable housing near transit
- Target housing rehabilitation programs near transit

Disadvantaged communities
& employment centers



moving people

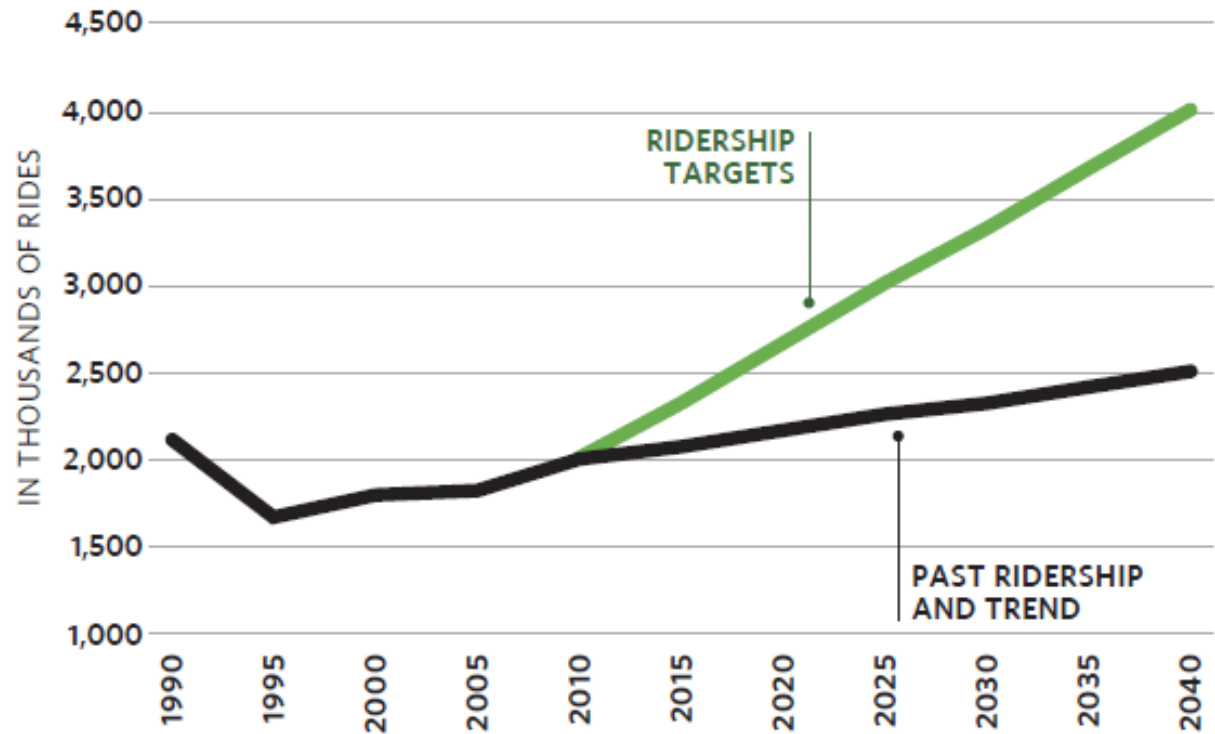
- Make transit easier and cheaper than driving
- Improve the system
- Put more people in closer proximity to transit

TRANSIT RIDERSHIP PER WEEKDAY

2.3 million by 2015

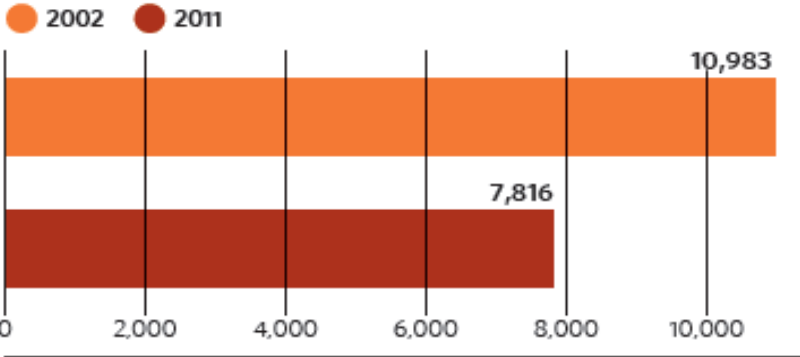
4.0 million by 2040

Figure 62. Transit ridership targets, 1990-2040



Move freight and reduce congestion

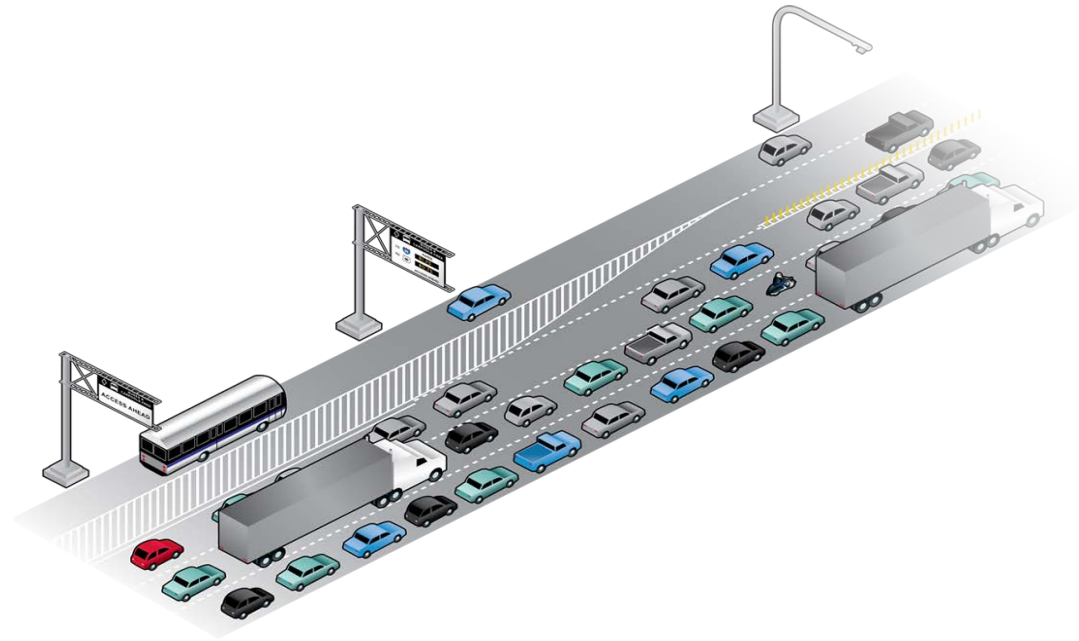
Weekday vehicle hours of delay at highway-rail crossings



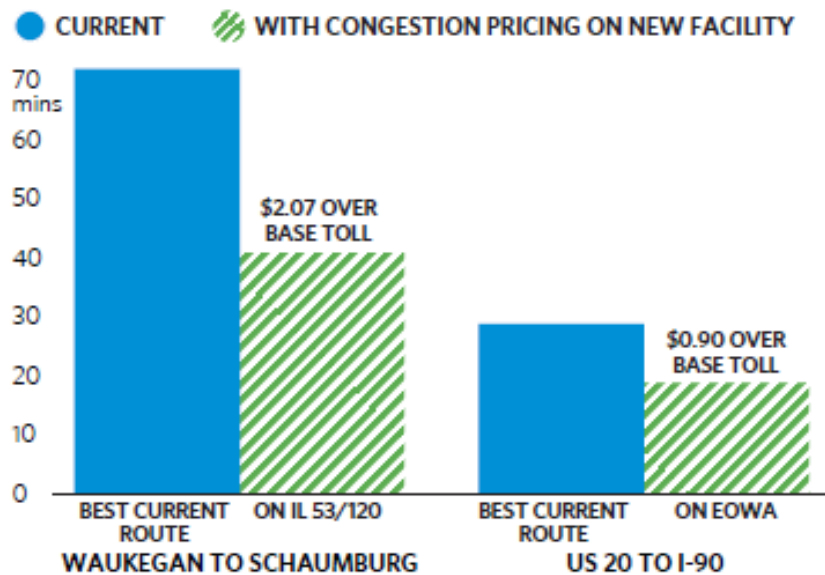
Excludes Kendall County.
Source: Illinois Commerce Commission.



congestion pricing

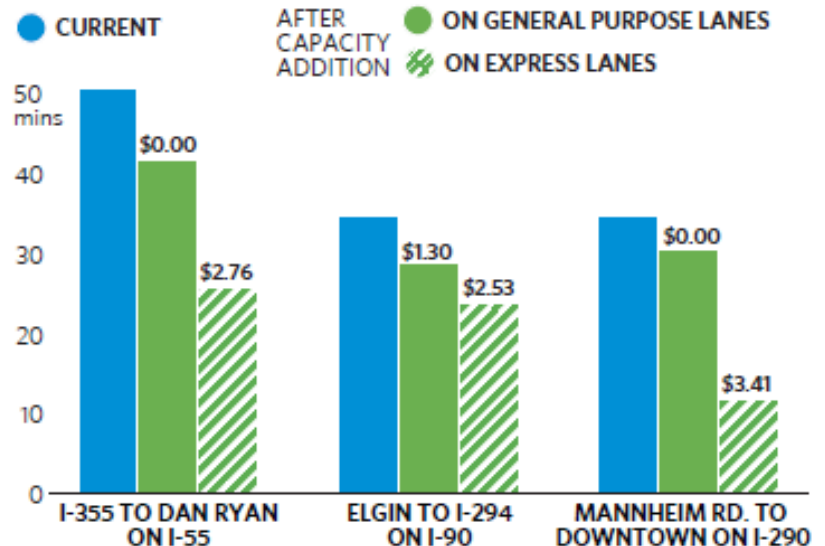


Travel time savings from new expressways with congestion pricing, travel times in minutes



Note: EOWB = Elgin O'Hare West Bypass. Source: CMAP analysis.

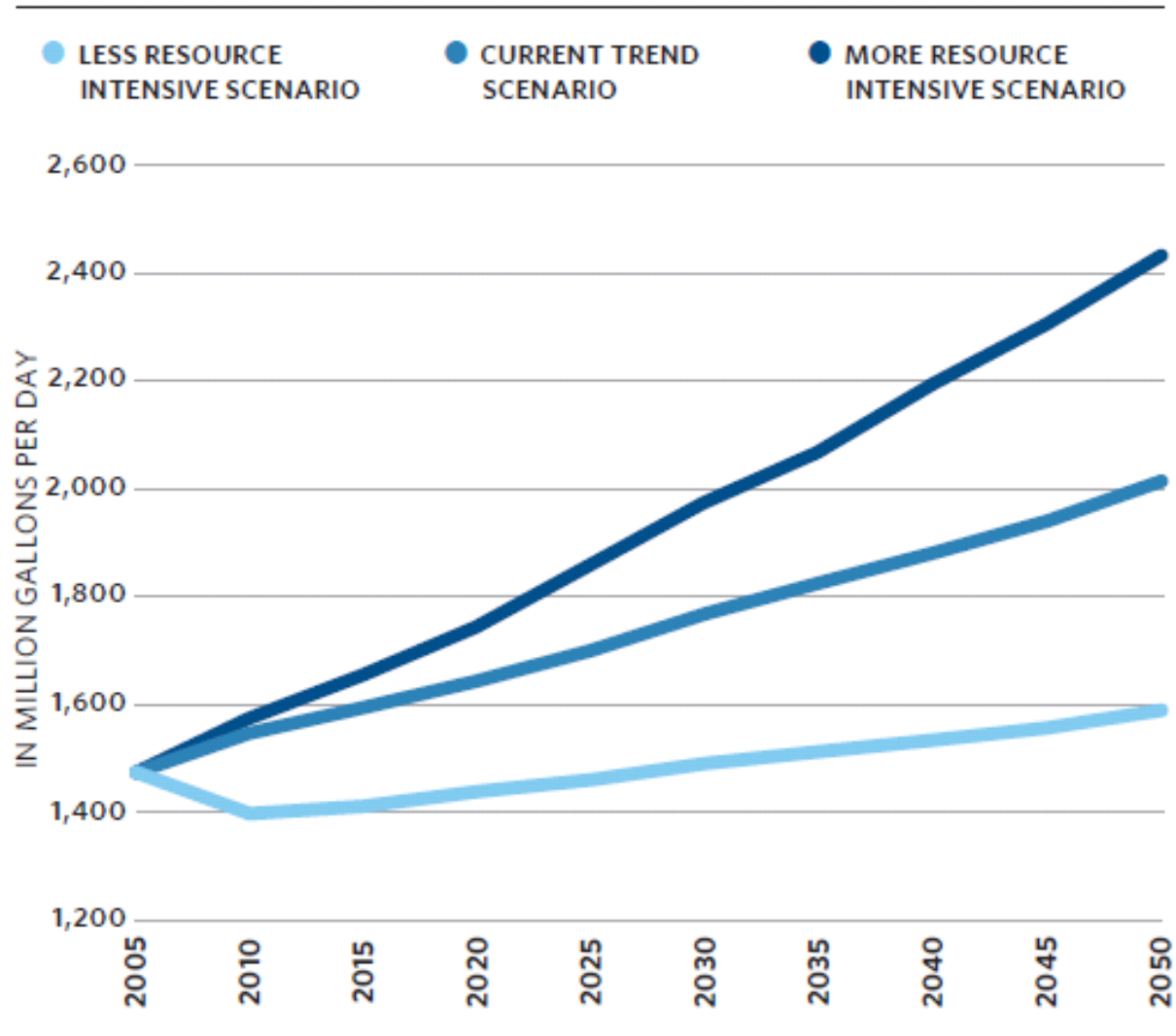
Travel time savings from the addition of new lanes with congestion pricing, travel times in minutes



Source: CMAP analysis.

water resources

Figure 15. Demand scenario water withdrawals, 2005-2050



Source: Dziegielewski and Chowdhury, 2008

water resources

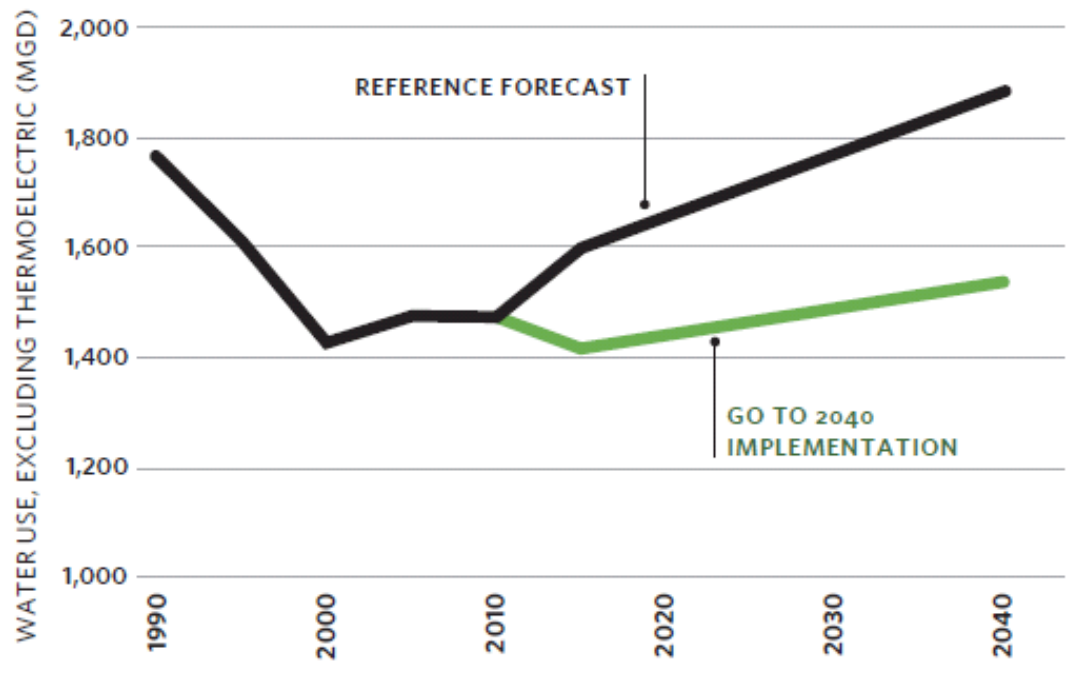
- Retrofit buildings, appliances and fixtures
- Promote rainwater harvesting
- Protect groundwater recharge areas
- Use full cost water pricing

WATER DEMAND PROJECTIONS

1,416 million gallons per day by 2015

1,539 million gallons per day by 2040

Figure 18. Water demand targets under the less resource intensive scenario, 1990-2040



Sources: Chicago Metropolitan Agency for Planning, 2010; Dziegielewski and Chowdhury, 2008

water resources

Figure 20. Projected water savings from conservation measures

If 50% of our region put these three water conservation measures into place, we could reduce our per capita daily water consumption by almost 20 gallons per person.



UPDATE FIXTURES

↓ 86,200,000 gals/day



UPDATE TOILETS

↓ 74,800,000 gals/day



CONSERVE USAGE

↓ 60,300,000 gals/day

land resources

Figure 28. Regional conservation open space

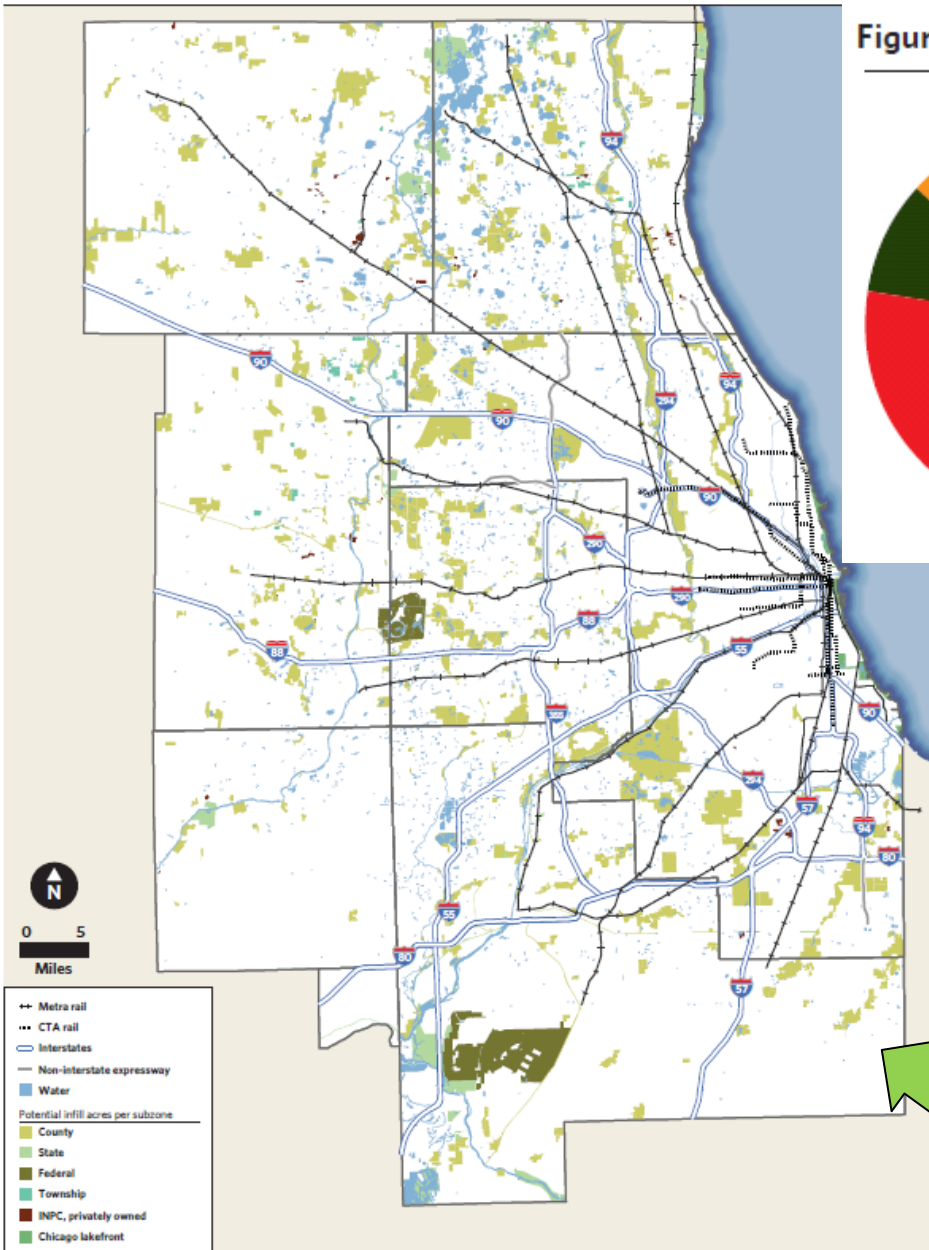
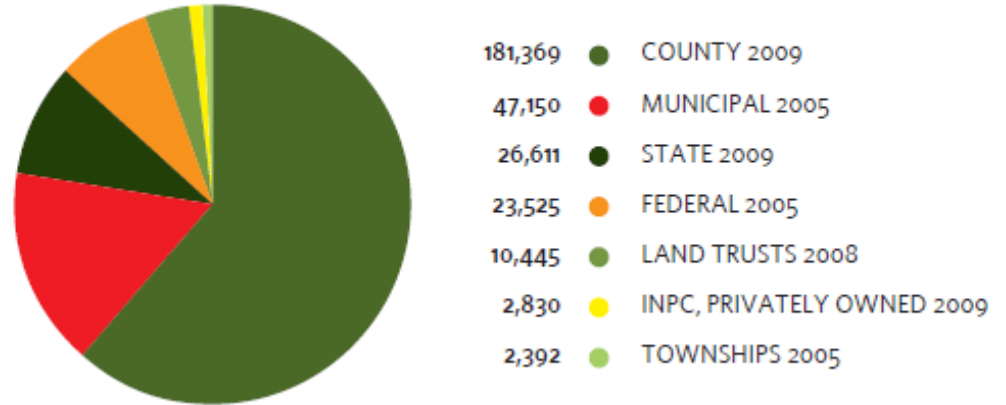


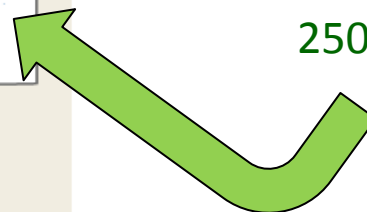
Figure 27. Total parks and open space holdings, in acres



Approximately 300,000 acres in parks, easements, nature preserves, forest preserves, and state and federal holdings.

50,000 recreation acres

250,000 conservation acres



land resources

Figure 28. Regional conservation open space

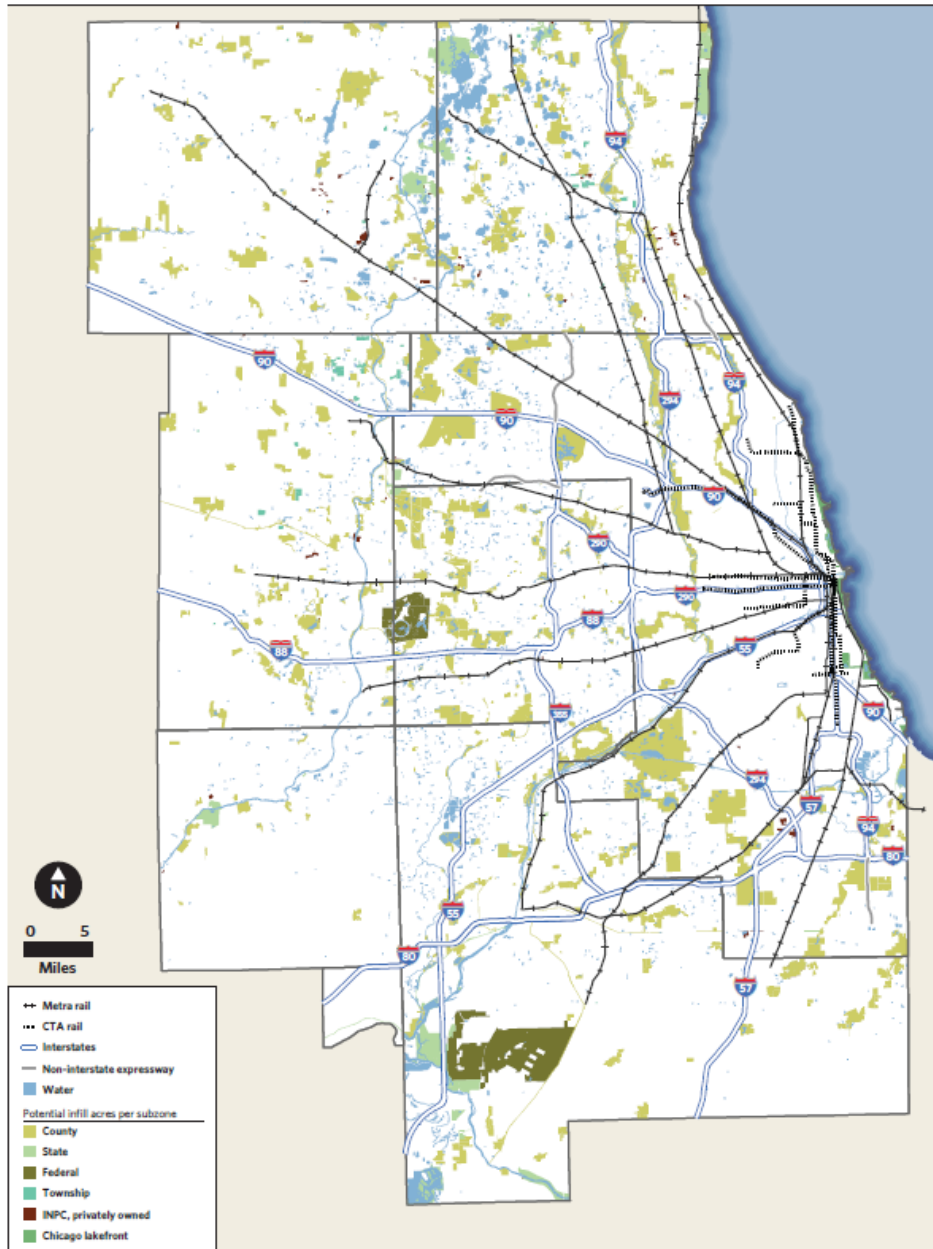
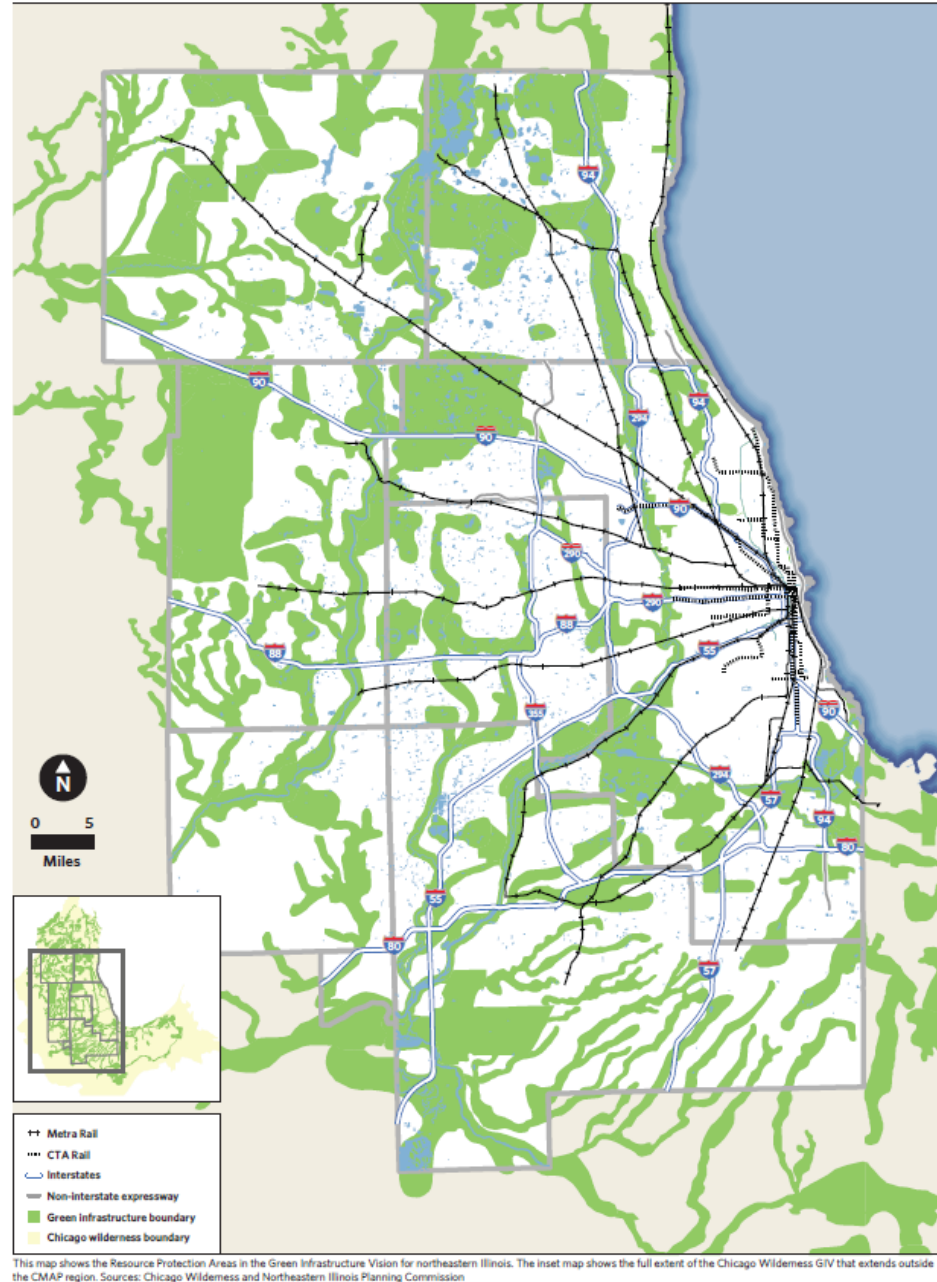
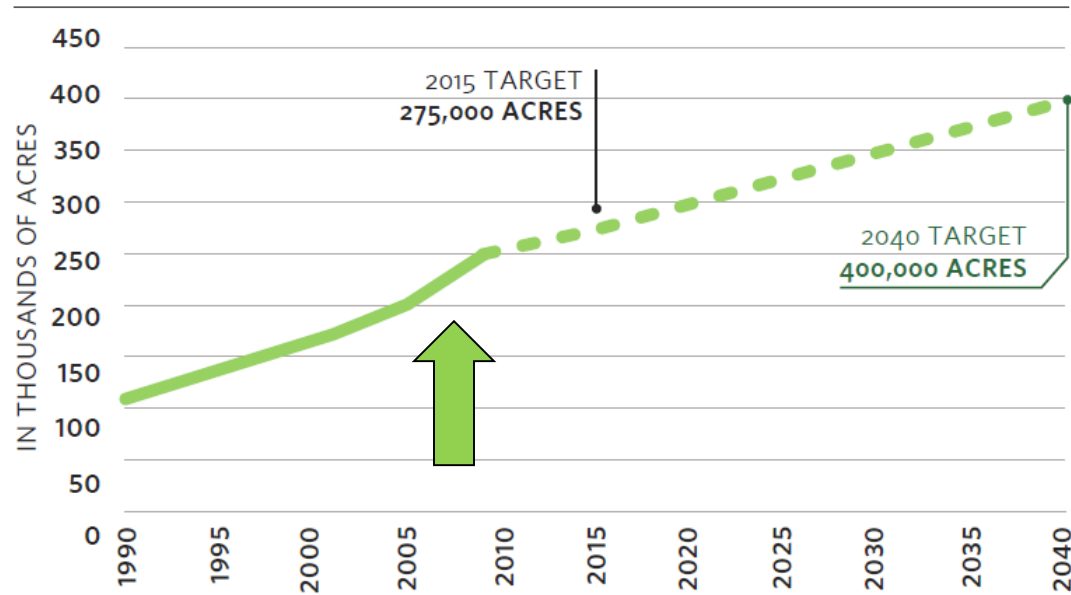


Figure 33. Green Infrastructure Vision



land resources

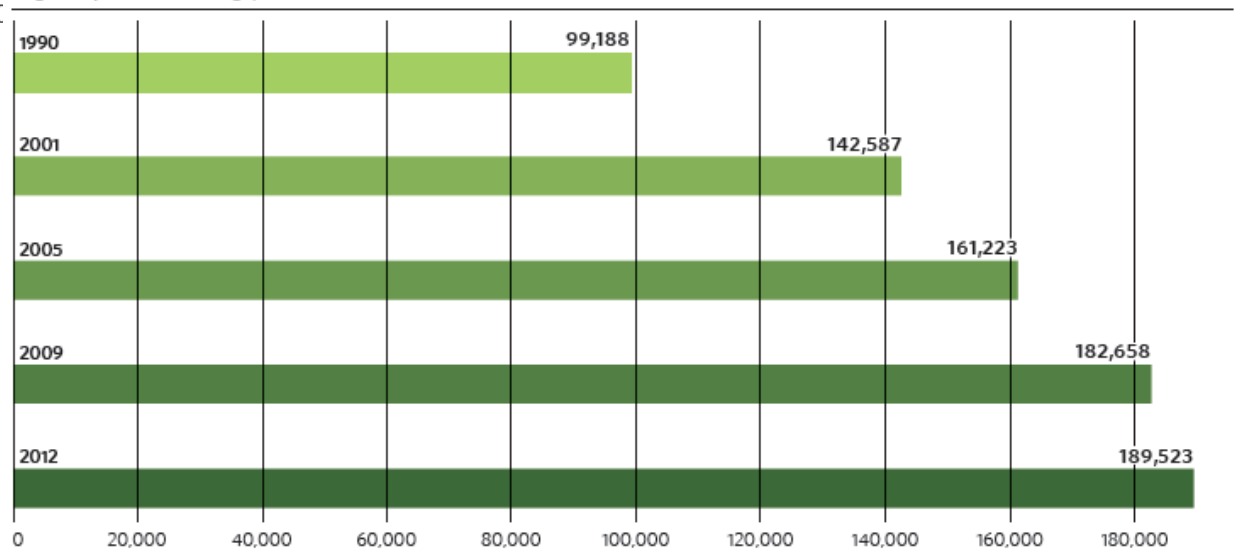
Figure 29. Conservation of open space targets, 1990-2040



100,000 acres (66%) of the target figure should be within the Green Infrastructure Vision area.

Source: Chicago Metropolitan Agency for Planning, 2012

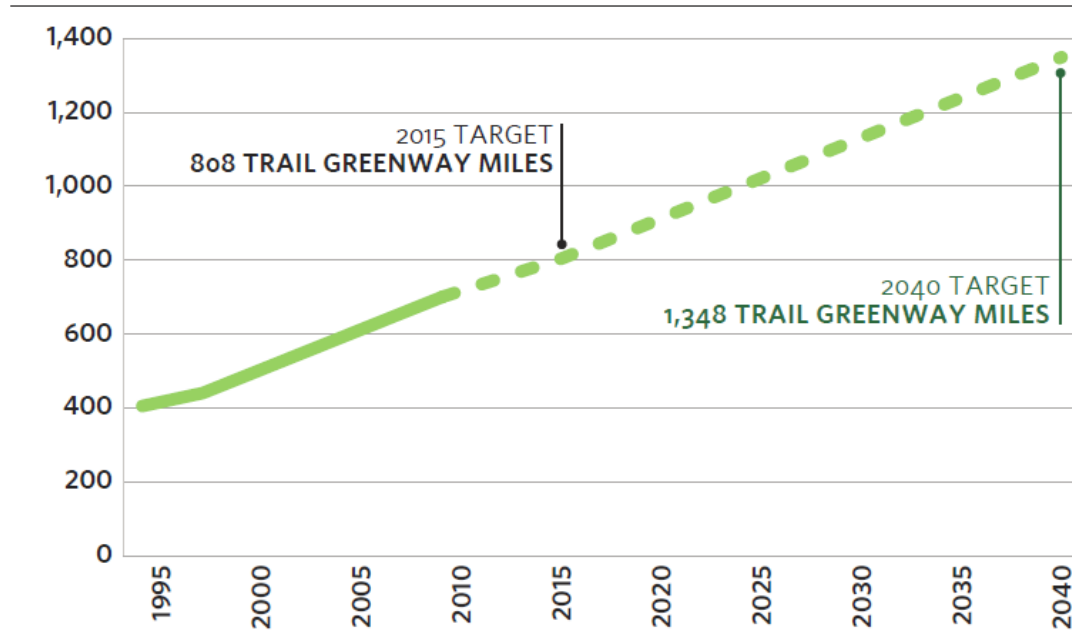
Regional protected acreage, 1990-2012



Source: County forest-preserve and conservation districts.

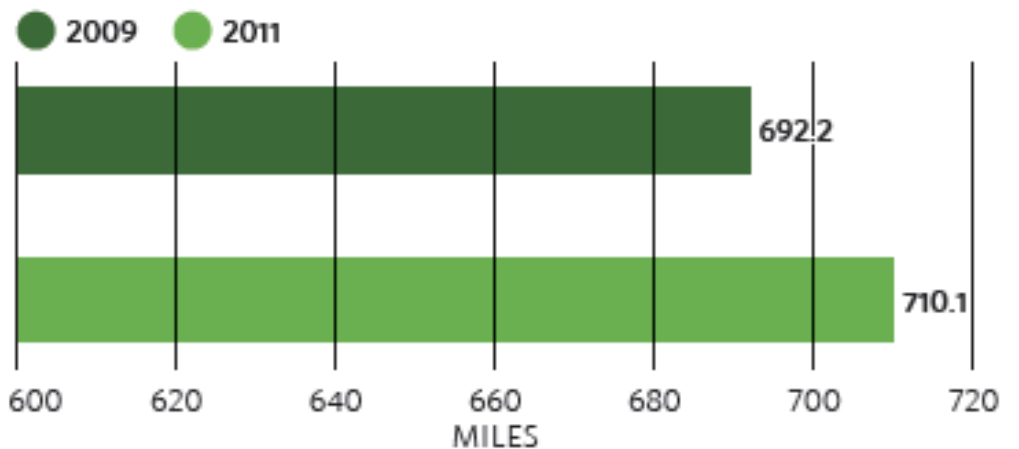
land resources

Figure 31. Miles of trail greenway targets, 1995-2040



Source: Chicago Metropolitan Agency for Planning, 2010

Regional miles of existing trail greenways

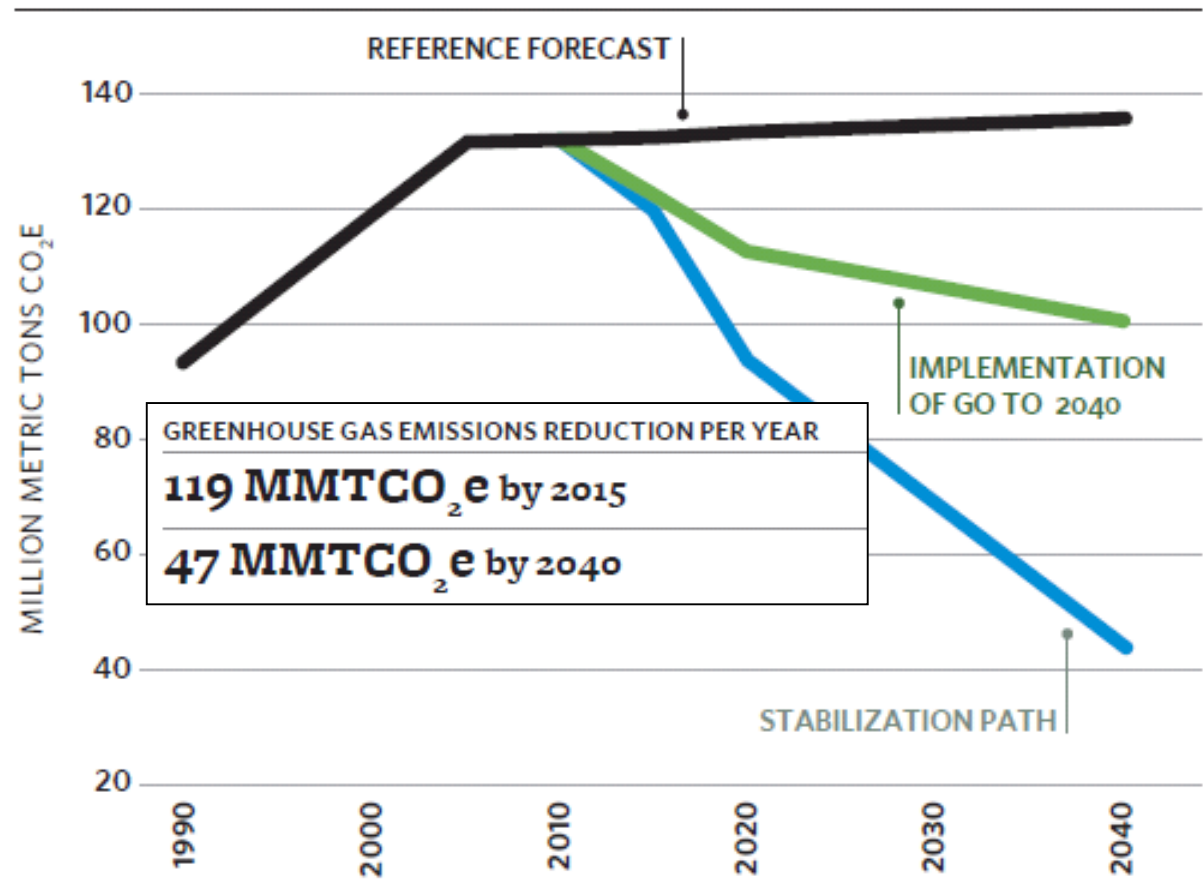


Source: CMAP Bicycle Information System.

energy resources

- Plan to co-locate transit, housing, and jobs
- Promote home retrofit programs
- Encourage renewable energy production

Figure 24. Greenhouse gas emissions targets, 1990-2040



Sources: Chicago Metropolitan Agency for Planning and the Center for Neighborhood Technology, 2010



Sustainability + Local Governments

Illinois Sustainable Technology Center

April 18, 2014

Kristin Ihnchak
Senior Planner



Chicago Metropolitan
Agency for Planning

Agenda

- Local Technical Assistance program
- Park Forest sustainability initiatives
- Sustainability Plan Toolkit project
- Discussion

A vibrant street scene with trees, parked bicycles, and a brick-paved sidewalk. A person is visible near a storefront on the right.

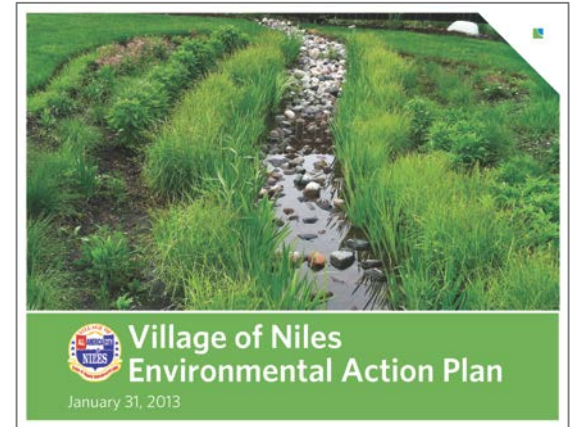
Local Technical Assistance program

Local Technical Assistance Program

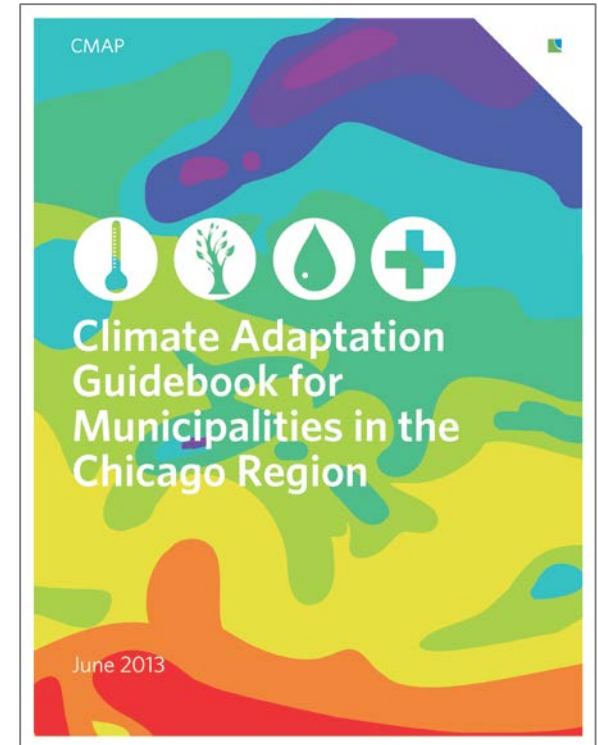
- Purpose is to implement GO TO 2040 plan through direct assistance to communities
- Program is funded through a number of sources, including Unified Work Program (UWP) funds
- Approximately 50 projects complete, 50 projects ongoing, with more under development and consideration
- Most projects are led by CMAP staff; some include assistance from outside contractors for some or all project elements

LTA Sustainability Plans

- Park Forest Sustainability Plan
- Niles Environmental Action Plan
- Lake County Sustainability Chapter
- DuPage County Sustainability Plan (Summer 2014)



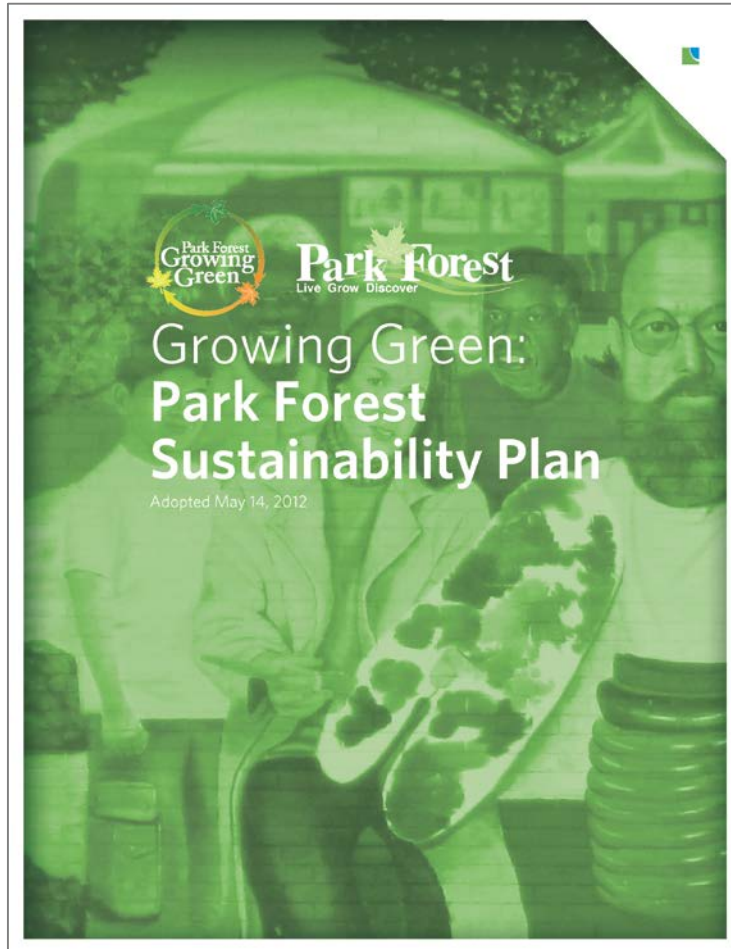
- Local food systems
- Bicycle and pedestrian plans
- Parking management studies
- Parks master plans
- Water conservation plans
- Climate Adaptation Toolkit



A photograph of a wooden boardwalk with railings, built over a wetland area. The boardwalk is made of light-colored wood and has several informational signs attached to the railings. The surrounding area is lush with green grass and tall reeds. In the background, there is a line of trees under a blue sky with scattered clouds. The text "Park Forest sustainability initiatives" is overlaid on the image in a white, sans-serif font.

Park Forest sustainability initiatives

Park Forest Sustainability Plan



-  **1: Development Patterns**
-  **2: Transportation and Mobility**
-  **3: Open Space and Ecosystems**
-  **4: Waste**
-  **5: Water**
-  **6: Energy**
-  **7: Greenhouse Gases**
-  **8: Green Economy**
-  **9: Local Food Systems**
-  **10: Municipal Policies and Practices**
-  **11: Education**
-  **12: Community Health and Wellness**
-  **13: Housing Diversity**
-  **14: Arts and Culture**

Policy/Programmatic Recommendations



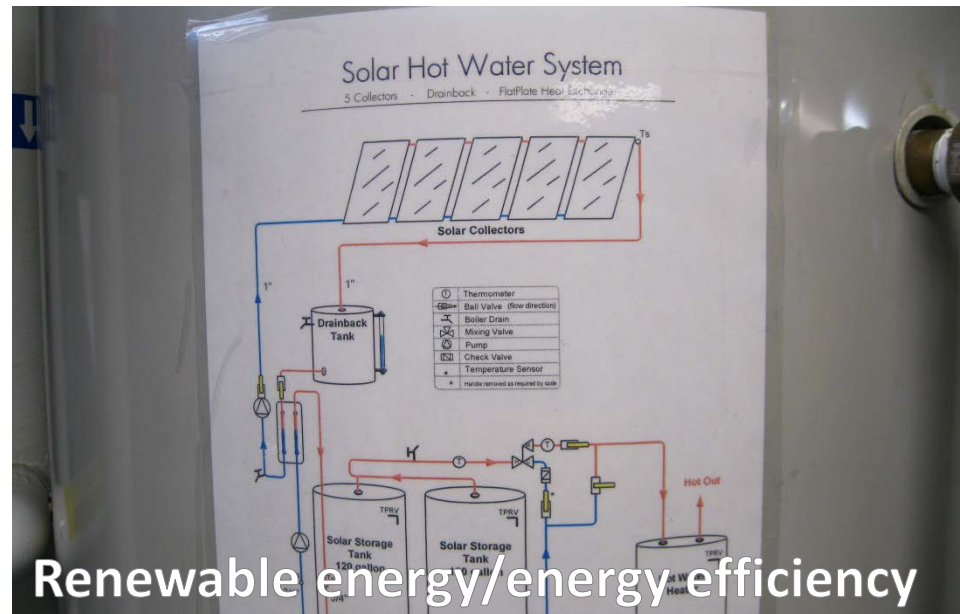
Housing options



Community garden program



Green infrastructure network



Renewable energy/energy efficiency

Regulatory Recommendations

| Priority | References/Notes | Issue | Existing Code Provision(s) | Recommended Changes | |
|---|---|--|--|--|---|
| | | Mixed-Use Commercial Areas | | | |
| High | Commercial | Mixed-use | Sec. 118-152 minimum building setback | Create a mixed-use district for Downtown, & Mixed-Use Development Handbook; 211th Street TOD | |
| Commercial district | of 25' in C-1 & C-2 districts. Sec. 118-153 dwelling units permitted above commercial uses when approved as part of a development plan. No regulation of parking | | 211th St station area, & neighborhood commercial areas. Require buildings built along the sidewalk or in a small build-to zone adjacent to the sidewalk. and parking | | |
| Space and lot size ing coverage limits | in rear or single bay on the side; permit residential uses above commercial by-right; reduce required lot size and increase | | Implementation Study | | location. Current open s requirements and build prevent urban form |
| verage. Consider requirements to C-1 | | | | | permitted building co applying some of the and/or C-2 districts. |
| ED-ND NPD Credit 3 | walkability to daily needs | Sec. 118-153. Permitted uses for C-1 & C-2 include auto-oriented uses (auto service stations and repair shops, drive-through establishments) | Permitted uses in the new mixed-use district (outlined above) that focus on daily needs (dry cleaning, child care, coffee shop, corner store, pharmacy, etc.); prohibit auto-oriented uses | | |
| None | | Provide incentives for or require design features that enhance walkability in the | I/II | Medium | Use LEED-ND NPD Credit 1: Walkable |
| | mixed-use district, such as incorporation of clear glass storefronts, functional street side entries, limited curb cuts. Expressly permit sidewalk cafes, street furniture & planters | | Streets as a starting point for developing standards | | |
| ts | I | High | Commercial & Mixed-Use Development | Human scale | Sec. 118-152 minimum acreage for district designation - C-1, 1 acre; C-2, 3 acres. |
| | | | | | Eliminate minimum acreage requirements in all commercial or mixed-use districts to enable a smaller scale of commercial development |
| | Drive through | Sec. 118-153, 118-154. Drive through | Limit drive-through facilities in number and | I | High |

A photograph of a dirt path leading into a dense forest. The path is made of light-colored soil and gravel, winding through thick green bushes and trees. Sunlight filters through the leaves, creating dappled light on the path. The text "Sustainability Plan Toolkit project" is overlaid in white, bold font across the middle of the image.

Sustainability Plan Toolkit project

Sustainability Plan Key Components

- Focus on environmental issues
- Data & indicators
- Implementation & monitoring

Example Indicators

Greenhouse gas emissions

Transit ridership

of community gardens

Open space per capita

Recycling rate

Energy consumption

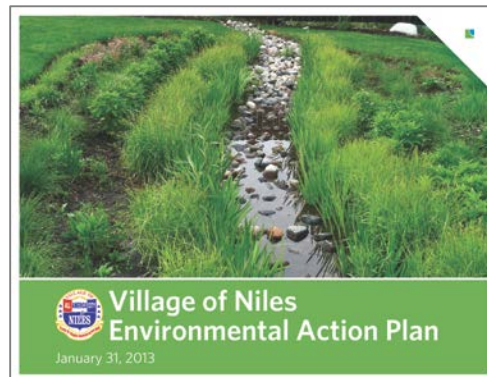
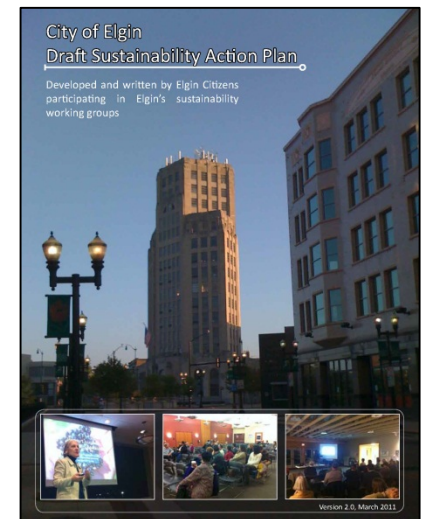
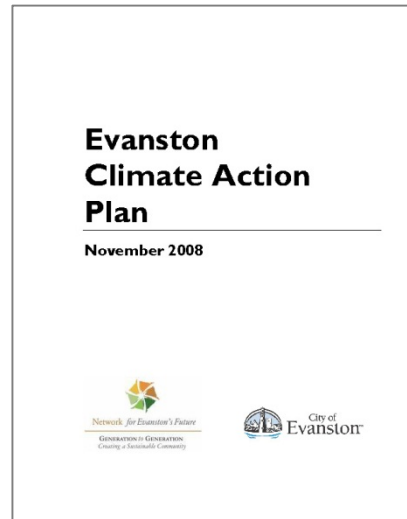
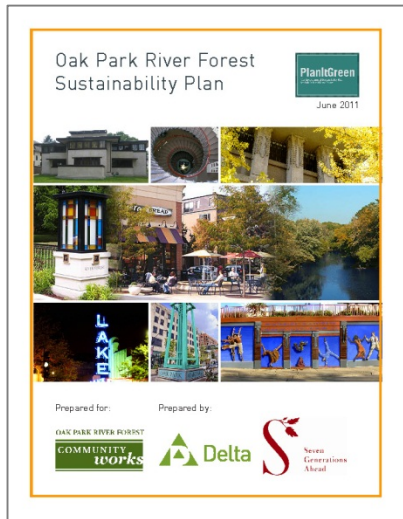
Key Toolkit Elements

- Major steps needed to create a sustainability plan;
- Identification of “core” plan topics and “strategies of impact”;
- Regional “core” indicators and data sources, guidance on setting targets and aggregating data;
- Standards for implementation and monitoring; and
- Guidance on public engagement strategies.

Proposed Toolkit Outline

- I. Introduction
- II. Become Plan-Ready
- III. Assess Existing Conditions
- IV. Develop the Plan
- V. Move Forward

“Core” Topic Areas: Existing Plans



Topic Areas: Background Research

| | CORE TOPICS | | | | | | | | | | |
|--|-----------------------|-------|-------|-------------|---------------|------------------|--------|----------------|------------------------|-------------------------|----------------|
| Document Name | Resource Conservation | Waste | Water | Air Quality | Climate / GHG | Renewable Energy | Energy | Green Building | Land Use / Development | Open Space & Ecosystems | Transportation |
| PlaNYC | | | + | + | + | + | + | | + | + | + |
| Highland Pk Community Sust Strategic Plan | | + | + | | + | | + | | + | + | + (mobility) |
| Aurora Sustainability Plan | + | + | + | | | | + | | + | | + |
| Elgin Sustainability Master Plan | + | + | + | | | + | + | + | + | + | + |
| Evanston Climate Action Plan | | + | | | + | + | + | + | + | + | + |
| Joliet Energy & Sustainability Strategy Plan | | + | | | + | + | + | + | + | | |
| Naperville Environmental Sustainability Plan | + | + | | | | | + | | + | | + (mobility) |
| OPRF Sustainability Plan | | + | + | | | | + | | + | + | + |
| Miami-Dade GreenPrint | | + | + | + | + | | + | | + | + | + |
| Chicago Climate Action Plan | | + | | + | + | + | + | | | | + |
| Woodstock Environmental Plan | + | | + | | | | + | + | + | + | + |
| Minneapolis Plan for Sustainable Growth | | | + | | | | | | + | + | + |
| Grand Rapids Sustainability Plan | | | + | + | + | + | + | | + | + | |
| Totals | 4 | 9 | 9 | 4 | 7 | 6 | 12 | 4 | 12 | 9 | 11 |

| | ADDITIONAL TOPICS | | | | | | | | | |
|--|----------------------|----------------|------------|---------|------------------|----------------|----------------|----------------------|-----------------------------|--------------------------------|
| Document Name | Green Economy / Jobs | Local Commerce | Local Food | Tourism | Civic Engagement | Arts & Culture | Human Services | Education Excellence | Community Health & Wellness | Affordable / Workforce Housing |
| PlaNYC | | | | | | | | | | |
| Highland Pk Community Sust Strategic Plan | + | + | | | + | + | | | | |
| Aurora Sustainability Plan | | | | | + | | | + | | |
| Elgin Sustainability Master Plan | + | + | | | + | | | | + | |
| Evanston Climate Action Plan | | | + | | + | | | + | | |
| Joliet Energy & Sustainability Strategy Plan | | | + | | | | | | | |
| Naperville Environmental Sustainability Plan | | | | | | | | + | | |
| OPRF Sustainability Plan | + | + | + | | | | | + | | |
| Miami-Dade GreenPrint | + | | | + | + | | | | + | |
| Chicago Climate Action Plan | | | | | | | | | | |
| Woodstock Environmental Plan | + | + | | | | | | + | | |
| Minneapolis Plan for Sustainable Growth | + | + | | | | + | + | | | + |
| Grand Rapids Sustainability Plan | + | + | | + | + | + | | + | + | + |
| Totals | 7 | 6 | 3 | 2 | 6 | 3 | 1 | 6 | 3 | 2 |

Proposed “Core” Topic Areas

Core Topics

- A. Land Use and Development
- B. Transportation and Mobility
- C. Open Space and Ecosystems
- D. Water
- E. Waste
- F. Energy
- G. Air and Climate
- H. Education

Optional Topics

- A. Green Economy
- B. Local Food Systems
- C. Municipal Policies and Practices
- D. Community Health and Wellness
- E. Housing

Discussion



Thank you!

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CMAP website: www.cmap.illinois.gov

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Local Technical Assistance Program: www.cmap.illinois.gov/lta



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